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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,590	11/06/2000	Charles Baker	C40270/120935	6235

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EXAMINER
EASHOO, MARK

ART UNIT	PAPER NUMBER
1732	7

DATE MAILED: 07/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

Office Action Summary	Application No.	Applicant(s)	
	09/706,590	BAKER, CHARLES	
	Examiner	Art Unit	
	Mark Eashoo, Ph.D.	1732	

-- The MAILING DATE of this communication appears on the cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-60* is/are pending in the application.

4a) Of the above claim(s) *1-18,39-44,47,59 and 60* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-38,45,46 and 48-58* is/are rejected.

7)☒ Claim(s) *22* is/are objected to.

8)☒ Claim(s) *1-60* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of group II, claims 19-38, 45-46, and 48-58 in Paper No. 6, filed 14-MAY-2002 is acknowledged. Applicant's traversal is persuasive. Nonetheless, the restriction presented in this Office action is proper and is currently made non-final.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-18, 39-44, 47 and 59-60, drawn to an article, classified in class 428, subclass 425.6.

II. Claims 19-38, 45-46, and 48-58, drawn to a process of forming a composite material using a die (ie. extrusion molding), classified in class 264, subclass 101.

The inventions are distinct, each from the other because of the following reasons:

Inventions of groups II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process such as compression molding or injection molding.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 34 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for wood fibers and fiberglass, does not reasonably provide enablement for fibers made of crumb rubber. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. Specifically, the instant specification does not recite any use or mention fibers made of crumb rubber.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 48-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 48 recites the limitation "the fiberglass/thermal plastic mixture" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claims 19-38 and 45-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 19 recites the limitation "the fiberglass/thermal plastic mixture" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Objections

Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The independent claim 19 recites the limitation of claim 22 directed to heating fibers to remove moisture.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 19, 21-23, 26-28, 32-38, and 45-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Godavarti et al. (US Pat.6,265,037).

Regarding claims 19 and 22: Godavarti et al. teaches the instantly claimed process of forming a composite article, comprising: adding 30-140 mesh wood fibers (8:22-59); drying or heating the fibers to remove moisture (4:45-51); contacting a molten/hot plastic with fibers and then forming the mixture with a die (13:20-67).

It is inherent that the process of extrusion contact a molten plastic with the fibers. Also Godavarti et al. inherently teaches the broad limitation of injecting hot plastic into a container, since the material is molten in the area of the extruder where intimate mixing occurs within the extruder.

Regarding claim 21 and 23: Godavarti et al. teaches applying a vacuum to the mixture in a twin screw extruder (4:55-61).

Regarding claim 26: Godavarti et al. teaches dyes (10:44-48).

Regarding claims 36 and 38: Godavarti et al. teaches 0.01-20 wt. % maleic anhydride (10:10-48).

Regarding claim 37: Godavarti et al. teaches a building board/panel (figs. 1-2).

Regarding claim 28: It is inherent that the extrudate of Godavarti et al. cools, at least to ambient temperature, upon existing the die.

Regarding claim 32-34: Godavarti et al. teaches fibers from an agricultural by-product, namely, wood (8:23-59).

Regarding claim 35: Godavarti et al. teaches polypropylene (fig. 3).

Regarding claims 45-46: Godavarti et al. teaches various fillers and fibers, including glass fibers (12:29-49).

Claims 48, 50-51, and 53-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Godavarti et al. (US Pat.6,265,037).

Regarding claims 48 and 54: Godavarti et al. teaches the instantly claimed process of forming a composite article, comprising: adding 50-2000μm (0.002 – 0.08 inch) wood fibers (8:22-59); drying or heating the fibers to remove moisture (4:45-51); contacting a molten/hot plastic with fibers and then forming the mixture with a die (13:20-67).

It is inherent that the process of extrusion contact a molten plastic with the fibers. Also Godavarti et al. inherently teaches the broad limitation of injecting hot plastic into a container, since the material is molten in the area of the extruder where intimate mixing occurs within the extruder.

Regarding claim 50 and 51: Godavarti et al. teaches applying a vacuum to the mixture in a twin screw extruder (4:55-61).

Regarding claim 53: Godavarti et al. teaches dyes (10:44-48).

Regarding claim 55: It is inherent that the extrudate of Godavarti et al. cools, at least to ambient temperature, upon existing the die.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 20, 24-25 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godavarti et al. (US Pat. 6,265,037) as applied to claims 19, 21-23, 26, 28, 32-38, and 45-46 above, and further in view of Woodhams (US Pat. 5,474,722).

Regarding claim 20: Godavarti et al. teaches the basic claimed process as set forth above.

Godavarti et al. does not teach a gravimetric feeder. Nonetheless, Woodhams teaches a gravimeteric feeder (5:10-12). Godavarti et al. and Woodhams are combinable because they are from the same field of endeavor, namely, forming plastic/wood composites. At the time of invention a person of ordinary skill in the art would have found it obvious to have used a gravimeteric feeder, as taught by

Woodhams, in the process of Godavarti et al., since Woodhams suggests that such feeder provides a controlled weighted quantity of fiber to form a desired resin/fiber mixture.

Regarding claims 24-25: Godavarti et al. does not teach drying the fibers at about 425°F (218°C). However, Woodhams teaches the wood fibers tend to decompose at temperatures above 220°C (4:47-50) and that processing temperature in excess of 220°C must be avoided. It is well known in the art to dry materials, such as wood, at high temperatures in order to remove the greatest amount of water in the shortest processing period. As such, a person of ordinary skill in the art would have found it obvious to have dried the fibers at about 425°F, as commonly practiced in the art, in the process of Godavarti et al., and would have been motivated to do so since Woodhams suggests a maximum process temperature of 220°C.

Claims 29-31: Godavarti et al. does not teach staged cooling, with a first cooling stage to about 200°F (93°C). Nonetheless, Woodhams teaches staged cooling, with a first cooling stage to about 90°C (6:17-19, 13:14-41, and examples). Woodhams also teaches a water spray cooling system (fig. 1, element 20) and cutting (6:17-19). At the time of invention a person of ordinary skill in the art would have found it obvious to have used staged cooling and cut it to length thereafter, as taught by Woodhams, in the process of Godavarti et al., since Woodhams suggest that such cooling preserves orientation and prevents die swell and forms a desired length product.

Claim 49, 52,and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godavarti et al. (US Pat. 6,265,037) as applied to claims 48, 50-51, and 53-55 above, and further in view of Woodhams (US Pat. 5,474,722).

Regarding claim 49: Godavarti et al. teaches the basic claimed process as set forth above.

Godavarti et al. does not teach a gravimetric feeder. Nonetheless, Woodhams teaches a gravimeteric feeder (5:10-12). Godavarti et al. and Woodhams are combinable because they are from the same field of endeavor, namely, forming plastic/wood composites. At the time of invention a person of ordinary skill in the art would have found it obvious to have used a gravimeteric feeder, as taught by Woodhams, in the process of Godavarti et al., since Woodhams suggests that such feeder provides a controlled weighted quantity of fiber to form a desired resin/fiber mixture.

Regarding claims 52: Godavarti et al. does not teach drying the fibers at about 425°F (218°C). However, Woodhams teaches the wood fibers tend to decompose at temperatures above 220°C (4:47-50) and that processing temperature in excess of 220°C must be avoided. It is well known in the art to dry

materials, such as wood, at high temperatures in order to remove the greatest amount of water in the shortest processing period. As such, a person of ordinary skill in the art would have found it obvious to have dried the fibers at about 425°F, as commonly practiced in the art, in the process of Godavarti et al., and would have been motivated to do so since Woodhams suggests a maximum process temperature of 220°C.

Claims 56-58: Godavarti et al. does not teach staged cooling, with a first cooling stage to about 200°F (93°C). Nonetheless, Woodhams teaches staged cooling, with a first cooling stage to about 90°C (6:17-19, 13:14-41, and examples). Woodhams also teaches a water spray cooling system (fig. 1, element 20) and cutting (6:17-19). At the time of invention a person of ordinary skill in the art would have found it obvious to have used staged cooling and cut it to length thereafter, as taught by Woodhams, in the process of Godavarti et al., since Woodhams suggest that such cooling preserves orientation and prevents die swell and forms a desired length product.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brooks et al., Giuseppe et al., Deaner et al., Brandt et al., Dahl et al., Koenig et al., and Zehner et al. all teach the basic state of the art.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (703) 308-3606. The examiner can normally be reached on 7am-3pm, Monday- Friday (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan Silbaugh can be reached on (703) 308-3829. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Mark Eashoo, Ph.D.
Primary Examiner
Art Unit 1732
15/Jul/02

me
July 15, 2002